HAKIT-RTG/GE/MG Series Certified Amplifier Kits

User Manual

Models	FCC ID
HAKIT-RTGU-100 HAKIT-RTGIU-100 HAKIT-RTMG-100 HAKIT-GE-100 HAKIT-RTGU-250 HAKIT-RTGIU-250 HAKIT-RTMG-250 HAKIT-GE-250 HAKIT-RTGU-500 HAKIT-RTGIU-500 HAKIT-RTMG-500 HAKIT-GE-500 HAKIT-RTGU-1000 HAKIT-RTGIU-1000 HAKIT-RTMG-1000	MYF-LCUSB
HAKIT-RTGXU-1000 HAKIT-RTGXIU-1000 HAKIT-GXE-1000	MYF-LCUSBX

(For 802.11b/g Wireless Networks)

Revision: D / Date: 06/14

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FCC Information

FCC Information

This equipment complies with CFR 47, Part 15.19 of the FCC rules. Operation of the equipment is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

This device must not be co-located or operating in conjunction with any other antenna or transmitter

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Federal Communications Commission (FCC) Requirements, Part 15

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

---Reorient or relocate the receiving antenna.
---Increase the separation between the equipment and receiver.
---Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
---Consult the dealer or an experienced radio/TV technician for help.

Regulatory information / Disclaimers

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government

CAUTION: To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use only the supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

MPE Statement (Safety Information)

Your device contains a low power transmitter. When device is transmitted it sends out Radio Frequency (RF) signal.

Safety Information

In order to maintain compliance with the FCC RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use only with supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

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When locating the antenna or operating this device you must observe the following exposure limits:

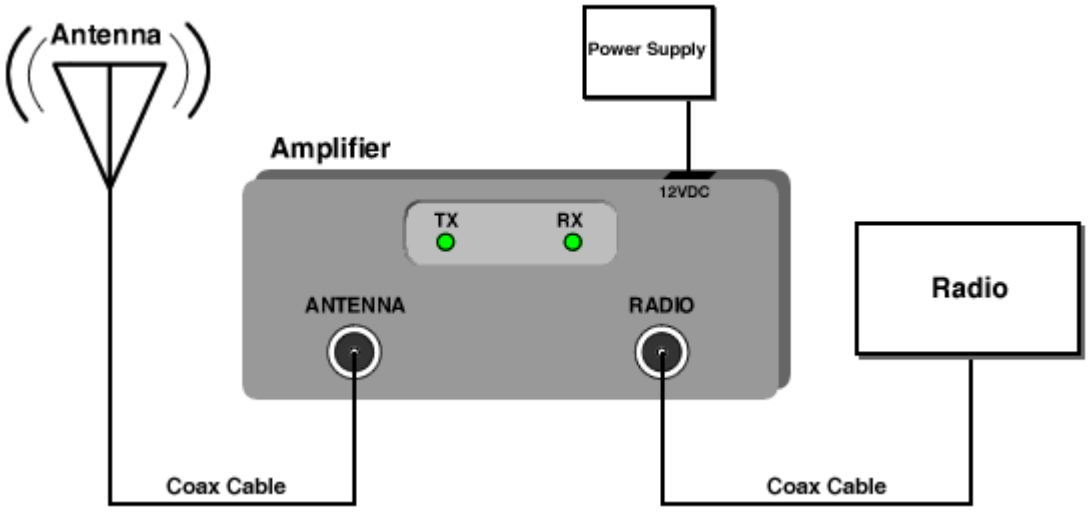
When this device is installed either as a fixed-mount or mobile application there is a minimum required separation distance of 20 cm from users.

Non-Amplified Systems:

For non-amplified systems simply attach the antenna into the antenna port on the USB adapter and proceed to USB Adapter Installation section.

Indoor Amplified Systems:

Amplifier connections are clearly labeled on the amplifier unit as shown below.



1. Connect the Antenna to the Amplifier output labeled "**ANTENNA**"
2. Connect the Radio to the Amplifier input labeled "**RADIO**" using a pigtail cable.
3. Plug the AC Adapter into the Amplifier's DC power jack and wall outlet.

Proceed to USB Adapter/Software Installation section.

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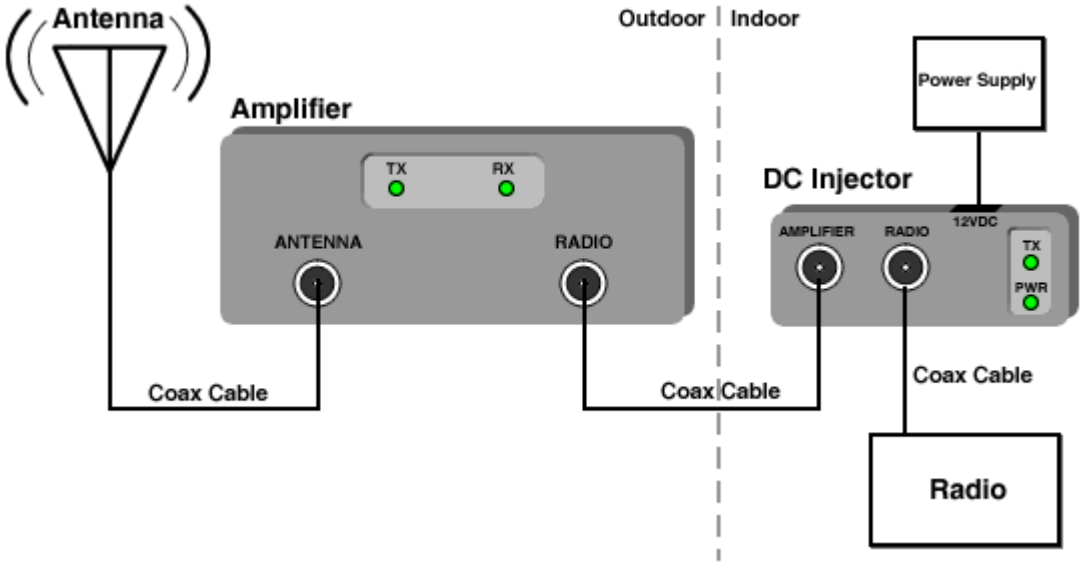
Outdoor Amplified Systems:

Amplifier connections are clearly labeled on the amplifier unit as shown below.



1. Connect the Antenna to the Amplifier output labeled "**ANTENNA**"
2. Connect the DC Injector output labeled "**TO AMPLIFIER**" to the Amplifier input labeled "**RADIO**"
3. Connect the Radio to the DC Injector input labeled "**RADIO**" using a pigtail cable.
4. Plug the AC Adapter into the DC Injector's DC power jack and wall outlet.

Proceed to USB Adapter/Software Installation section.

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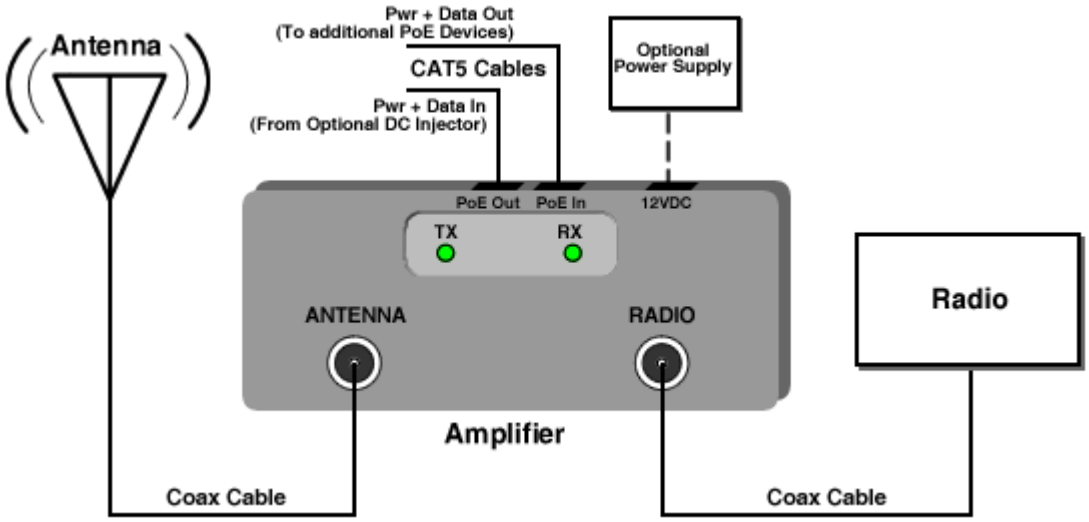
Power-Over-Ethernet (PoE) Amplified Systems:

Amplifier connections are clearly labeled on the amplifier unit as shown below.



1. Connect the Antenna to the Amplifier output labeled "**ANTENNA**"
2. Connect the Radio to the Amplifier input labeled "**RADIO**" using a pigtail cable.
3. To power the amplifier via the PoE interface, connect CAT5 Ethernet cables to the RJ45 jacks as shown. To power the amplifier using an optional AC Adapter, plug the AC Adapter into the Amplifier's DC power jack and wall outlet.

Proceed to USB Adapter/Software Installation section.

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USB Wireless Adapter and Software Overview

Product Introduction

The WLAN-LCUSB-02/03 adapter is designed to provide a high-speed and unrivaled wireless performance for your PC. With a faster wireless connection, you can get a better Internet service, such as downloading, gaming, video streaming and so on.

The WLAN-LCUSB-02/03 supports IEEE 802.11b/g 2.4GHz radio operation. With auto-sensing capability, the adapter packet transfer rate is up to 54 Mbps. Additionally, the WLAN-LCUSB-02/03 has good capability in anti-jamming and supports WEP, TKIP, AES, WPA, and WPA2 encryption, which prevents outside intrusion, protecting your personal information from being exposed. Featuring high-performance transmission rate, simple installation and adaptability, as well as strong security, the WLAN-LCUSB-02/03 is the perfect solution for small office and home needs.

System Requirements

Recommended system requirements are as follows:

- Windows XP, Windows 2000, Windows Vista and Windows 7
- Standard USB 2.0 port
- 32MB system memory or larger
- 300MHz processor or higher

USB Driver and Wireless Utility Information

To ensure proper operation of the WLAN-LCUSB-02/03 wireless adapter, the drivers and utility software contained on the enclosed CD must be installed. This software is designed specifically for the WLAN-LCUSB-02 and WLAN-LCUSB-03.

Operational Note:

The WLAN-LCUSB-02 and WLAN-LCUSB-03 is factory set to operate on channel 6 only.

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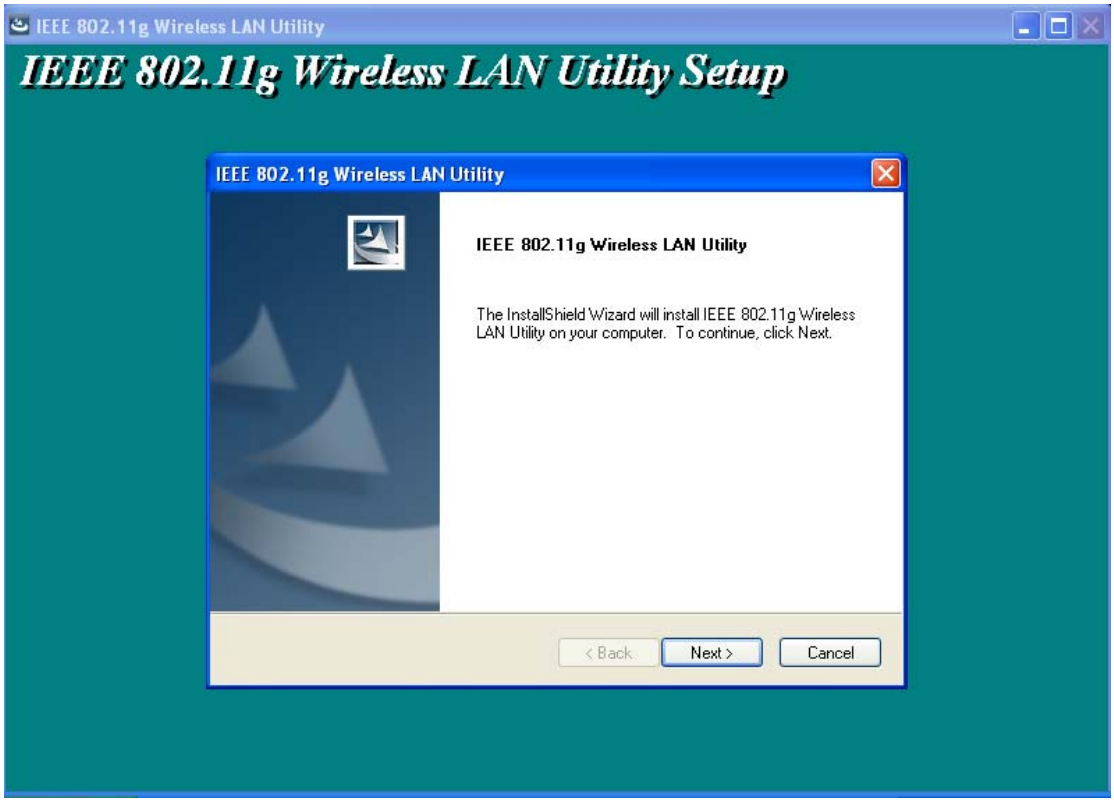
Installation

This chapter describes how to install the driver and utility of the WLAN-LCUSB-02/03. The following procedure is illustrated in Windows XP.

Installation Guide

Step 1 Find the setup file named **WLAN-LCUSB .exe** on the included CD and then double-click on it to start the installation. The page shown in the following figure appears. Then click "**Nex**t" to continue.


IEEE 802.11g Wireless LAN Utility
IEEE 802.11g Wireless LAN Utility Setup
IEEE 802.11g Wireless LAN Utility
IEEE 802.11g Wireless LAN Utility
The InstallShield Wizard will install IEEE 802.11g Wireless LAN Utility on your computer. To continue, click Next.
< Back
Next >
Cancel

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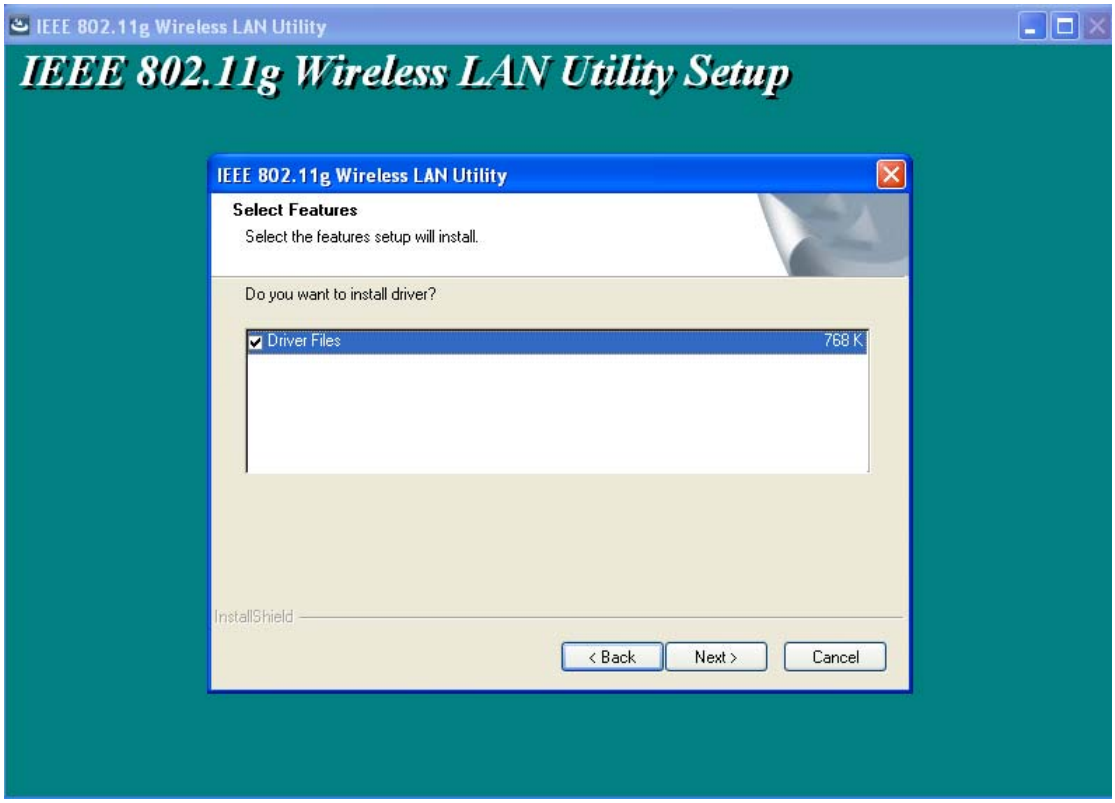
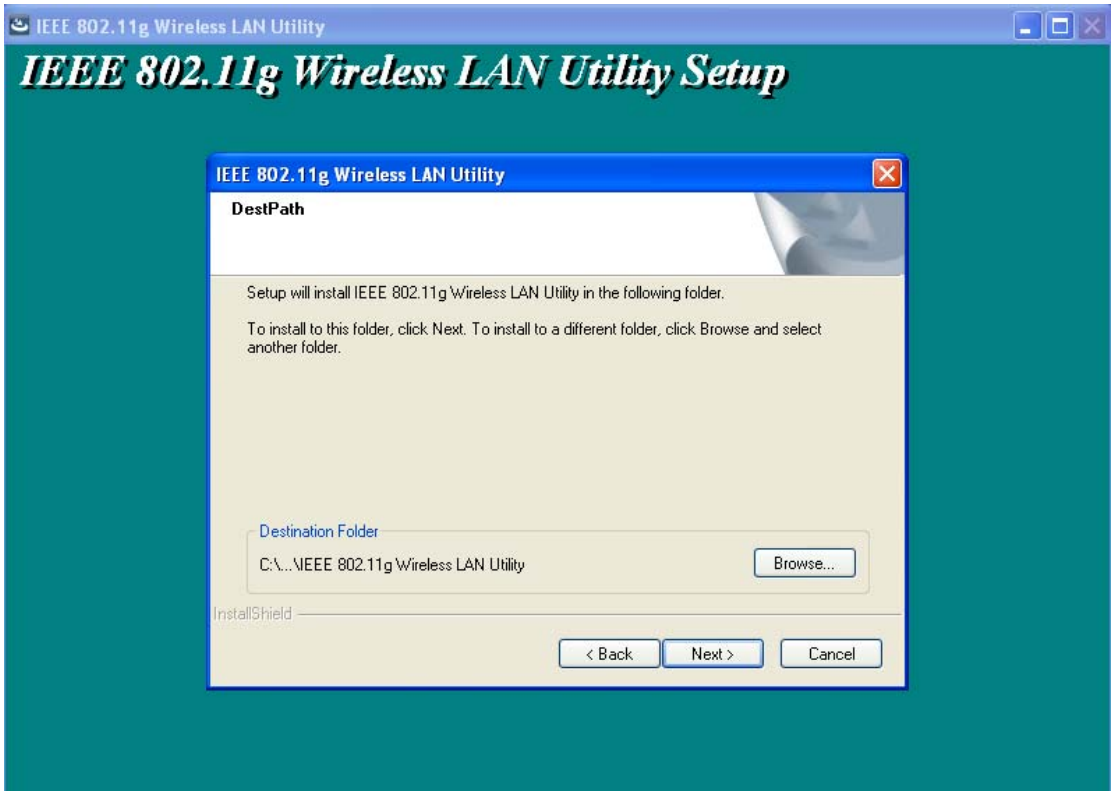
Be sure “Driver Files” are checked and click “**Next**” to continue.



Step 2 Select a destination folder for installation files. Then click “**Next**” to continue.


IEEE 802.11g Wireless LAN Utility
IEEE 802.11g Wireless LAN Utility Setup
IEEE 802.11g Wireless LAN Utility
DestPath
Setup will install IEEE 802.11g Wireless LAN Utility in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\...\IEEE 802.11g Wireless LAN Utility
Browse...
InstallShield
< Back
Next >
Cancel

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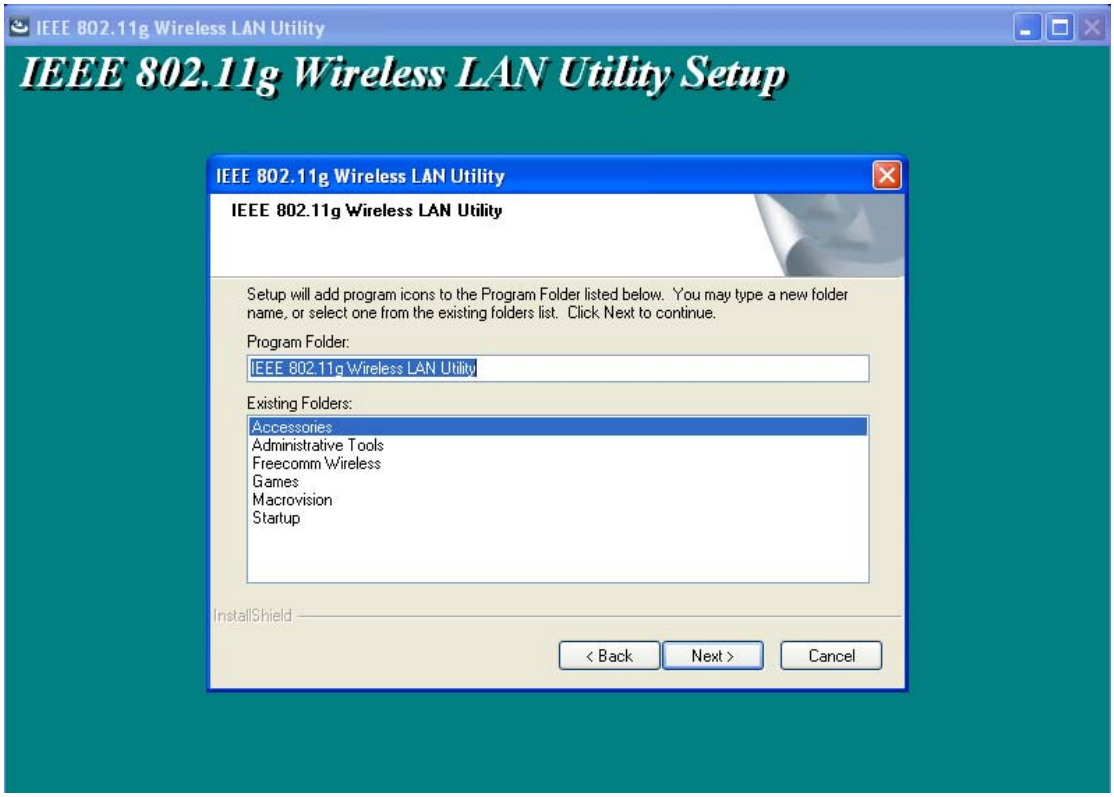
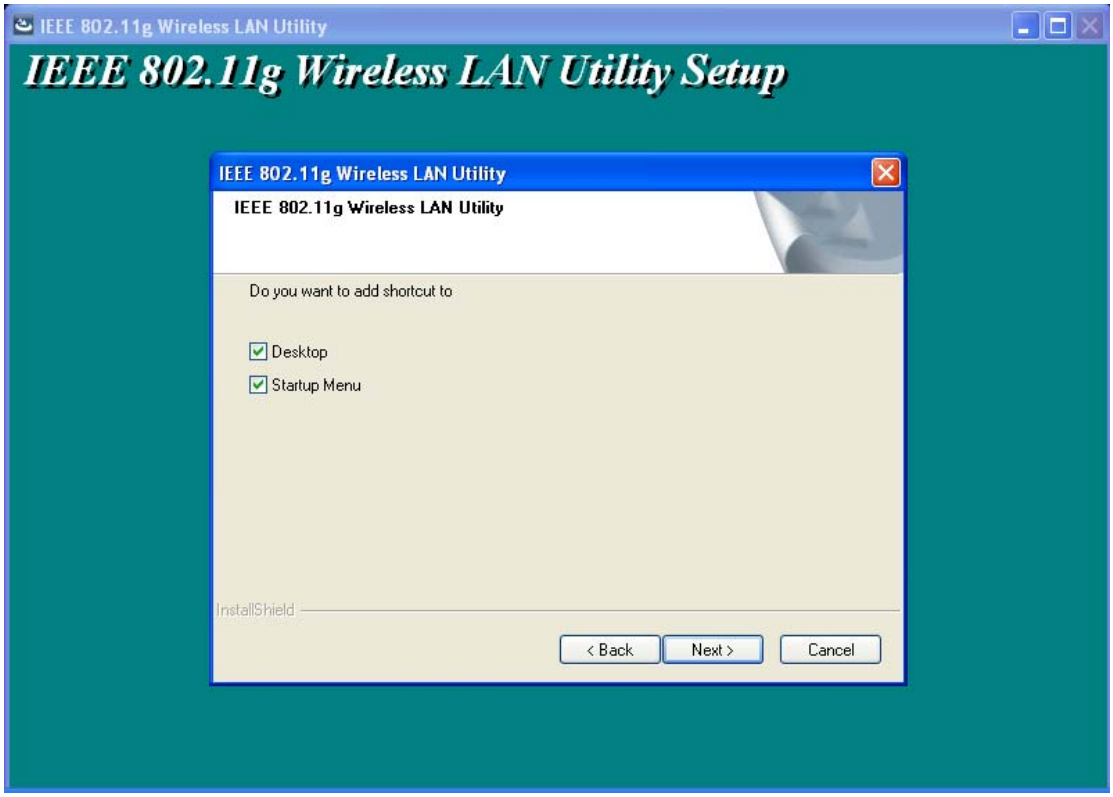
Step 3 Click "**Next**" to continue.


IEEE 802.11g Wireless LAN Utility
IEEE 802.11g Wireless LAN Utility Setup
IEEE 802.11g Wireless LAN Utility
IEEE 802.11g Wireless LAN Utility
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folder:
IEEE 802.11g Wireless LAN Utility
Existing Folders:
Accessories
Administrative Tools
Freecomm Wireless
Games
Macrovision
Startup
InstallShield
< Back
Next >
Cancel

Step 4 Click "**Next**" to continue.



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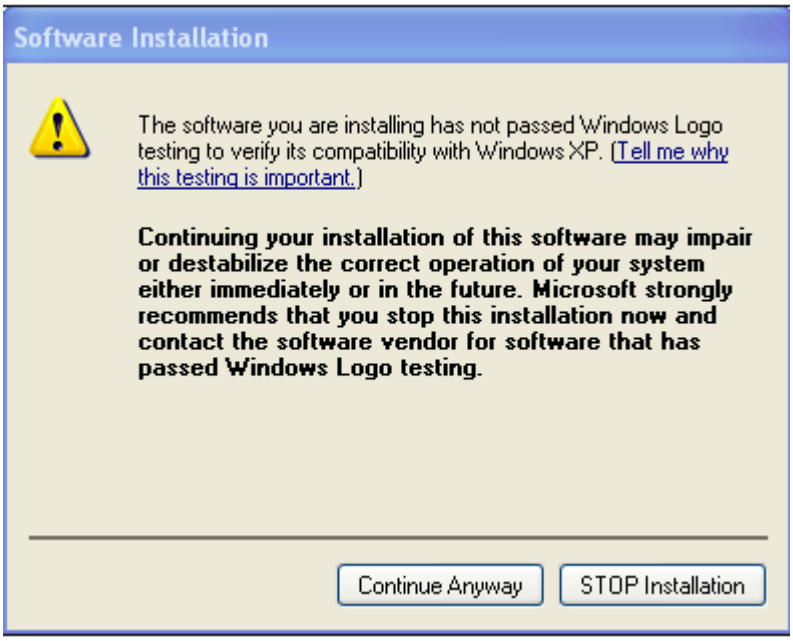
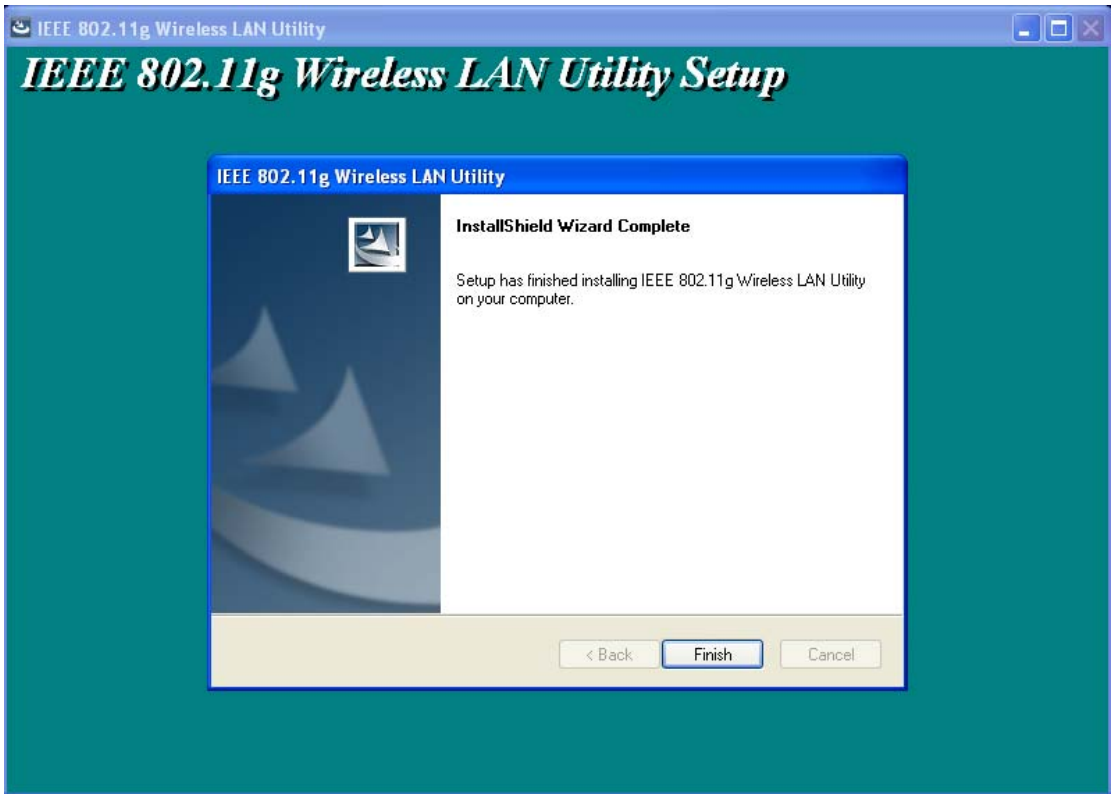
Step 5 The following warning will appear. Click the "**Continue Anyway**" button to continue the installation.


Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Step 6 After the installation has been completed, click "**Finish**" to exit the setup wizard.


IEEE 802.11g Wireless LAN Utility
IEEE 802.11g Wireless LAN Utility Setup
IEEE 802.11g Wireless LAN Utility
InstallShield Wizard Complete
Setup has finished installing IEEE 802.11g Wireless LAN Utility on your computer.
< Back
Finish
Cancel

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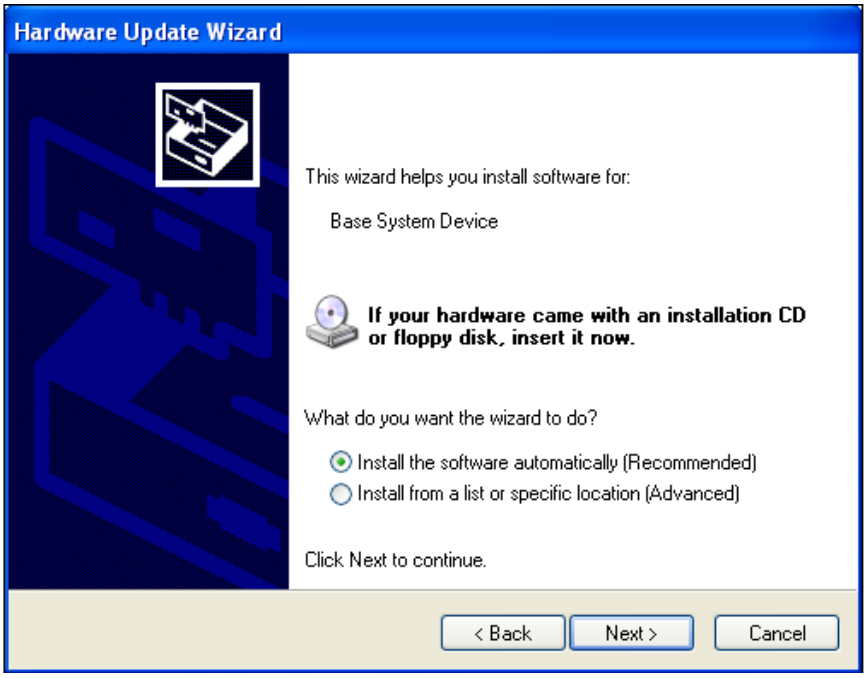
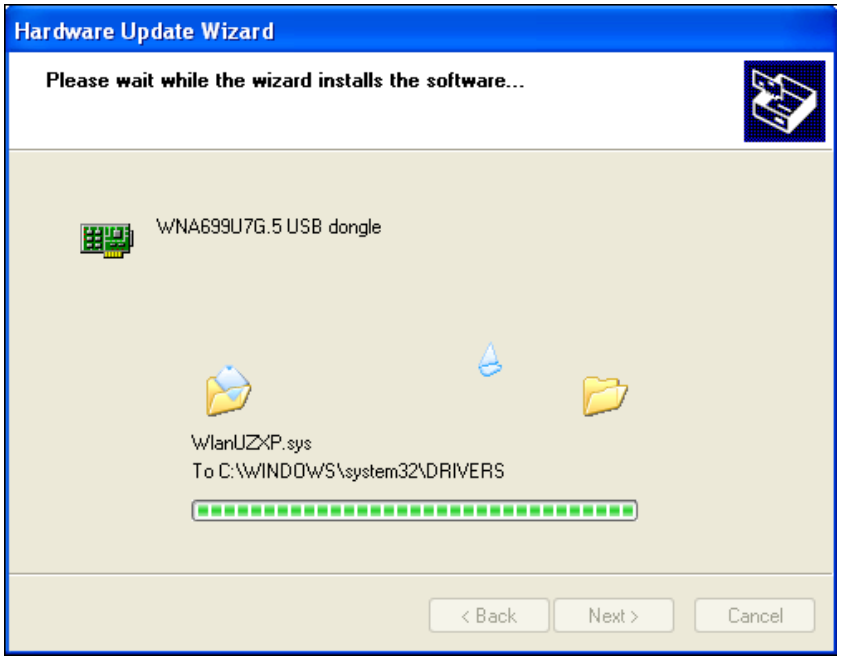
Step 7 Driver Installation

Step 8.1 After step 7, plug the USB adapter into any open USB slot on computer. The page shown in the following figure appears within seconds. Select "**Install the software automatically**" and click "**Next**" to continue.


Hardware Update Wizard
This wizard helps you install software for:
Base System Device
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

The drivers will then begin to install.



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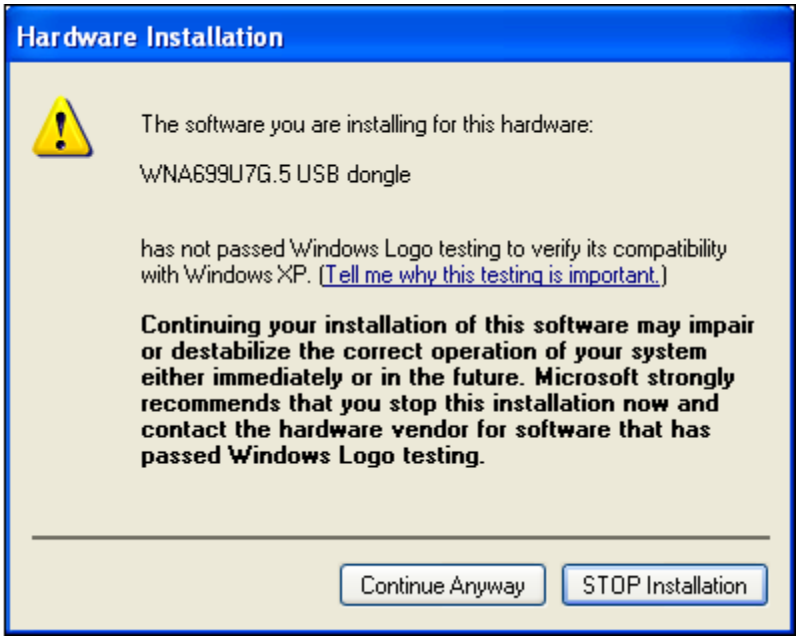
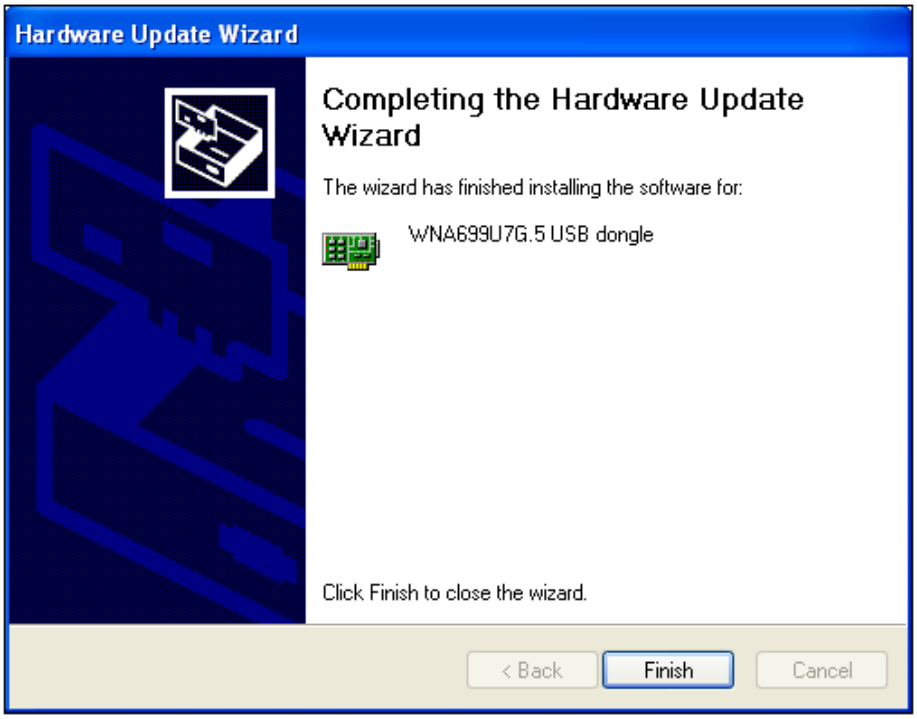
Step 8.2 The following warning will appear. Click the "**Continue Anyway**" button to continue the installation.


Hardware Installation
The software you are installing for this hardware:
WNA699U7G.5 USB dongle
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Step 8.3 After the installation has been completed, click "**Finish**" to exit the setup wizard.



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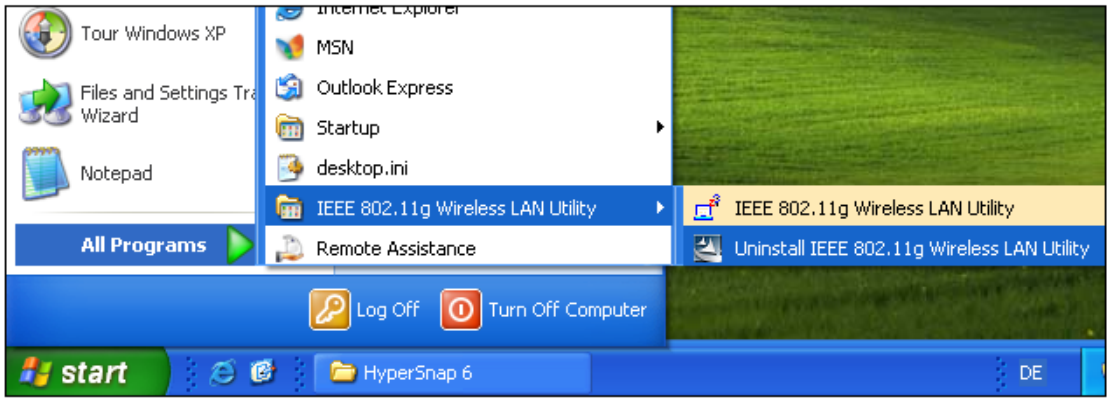
Uninstall the Software and Driver

Uninstall the utility software and driver from your PC

Step 1 Choose **Start** > **All Programs** > **IEEE 802.11g Wireless LAN Utility**, and the page shown in the following figure appears. Then choose **Uninstall IEEE 802.11g Wireless LAN Utility** from the menu.



Step 2 Follow the **Install Shield Wizard** to uninstall the utility software and driver from your PC.

Configuration

The WLAN-LCUSB-02/03 can be configured by its utility in Windows 2000, XP, Vista or Windows 7. This chapter describes how to configure your wireless adapter for wireless connectivity with trustable data security encryption features. The configuration procedures in Windows 2000, Windows Vista, Windows 7 and Windows XP are similar.

Checking the Utility

After completing the adapter's driver installation, choose **Start** > **All Programs** > **IEEE 802.11g Wireless LAN Utility** > to run the utility. Then the adapter's icon will appear in the system tray.

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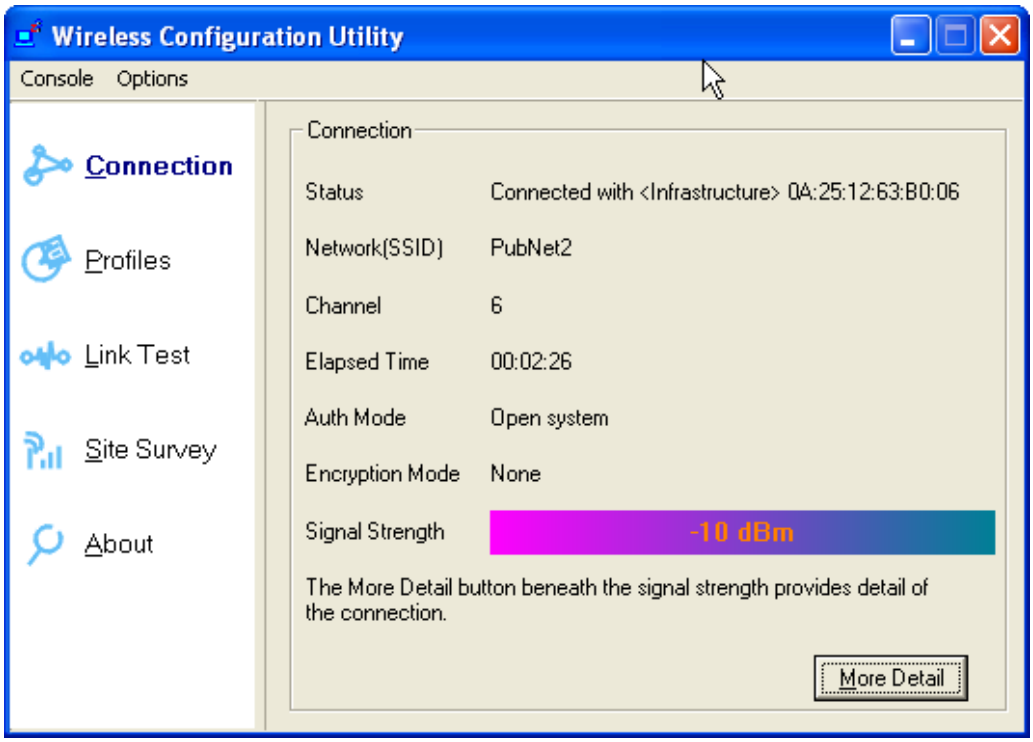
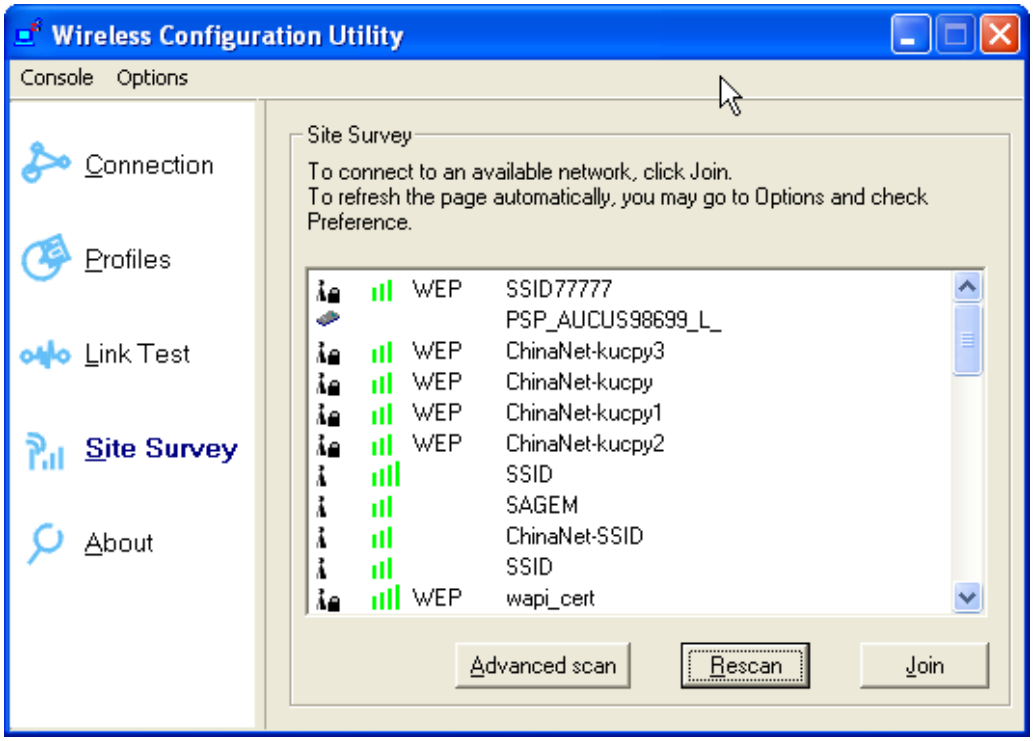
Connection status page of Main User Interface (UI)



This page shows the connection status information, such as SSID, Channel and so on.

Site Survey Page of Main UI



This page shows Site Survey information. Users may select one AP to connect to.

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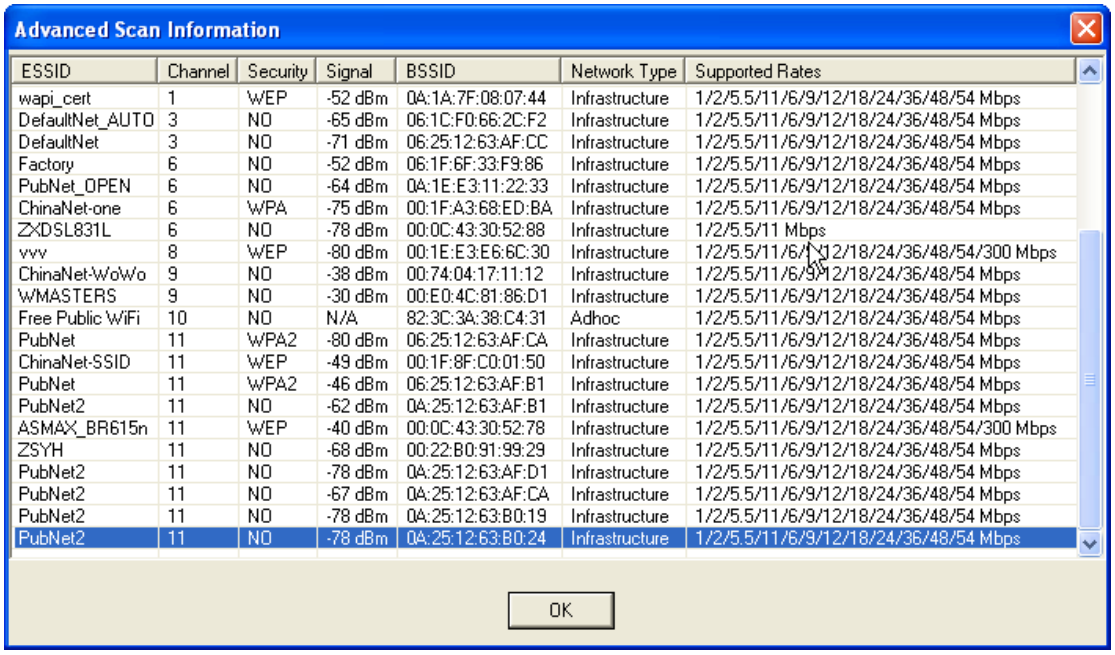
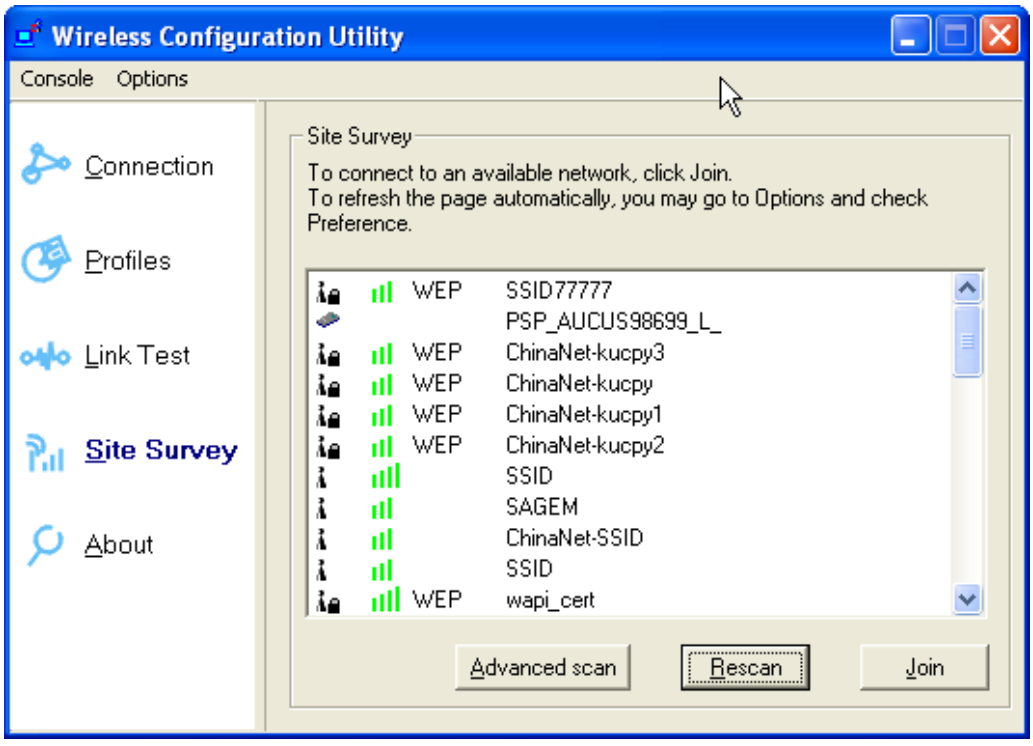
The Button “Advanced Scan” will show more information including channel as in the following picture:


Advanced Scan Information
ESSID Channel Security Signal BSSID Network Type Supported Rates
wapi_cert 1 WEP -52 dBm 0A:1A:7F:08:07:44 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
DefaultNet_AUTO 3 NO -65 dBm 06:1C:F0:66:2C:F2 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
DefaultNet 3 NO -71 dBm 06:25:12:63:AF:CC Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
Factory 6 NO -52 dBm 06:1F:6F:33:F9:86 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet_OPEN 6 NO -64 dBm 0A:1E:E3:11:22:33 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
ChinaNet-one 6 WPA -75 dBm 00:1F:A3:68:ED:BA Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
ZXDSL831L 6 NO -78 dBm 00:0C:43:30:52:88 Infrastructure 1/2/5.5/11 Mbps
vvv 8 WEP -80 dBm 00:1E:E3:E6:6C:30 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54/300 Mbps
ChinaNet-WoWo 9 NO -38 dBm 00:74:04:17:11:12 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
WMASTERS 9 NO -30 dBm 00:E0:4C:81:86:D1 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
Free Public WiFi 10 NO N/A 82:3C:3A:38:C4:31 Adhoc 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet 11 WPA2 -80 dBm 06:25:12:63:AF:CA Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
ChinaNet-SSID 11 WEP -49 dBm 00:1F:8F:C0:01:50 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet 11 WPA2 -46 dBm 06:25:12:63:AF:B1 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet2 11 NO -62 dBm 0A:25:12:63:AF:B1 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
ASMAX_BR615n 11 WEP -40 dBm 00:0C:43:30:52:78 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54/300 Mbps
ZSYH 11 NO -68 dBm 00:22:B0:91:99:29 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet2 11 NO -78 dBm 0A:25:12:63:AF:D1 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet2 11 NO -67 dBm 0A:25:12:63:AF:CA Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet2 11 NO -78 dBm 0A:25:12:63:B0:19 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
PubNet2 11 NO -78 dBm 0A:25:12:63:B0:24 Infrastructure 1/2/5.5/11/6/9/12/18/24/36/48/54 Mbps
OK

The “Rescan” Button will refresh information in the list.



To select an AP, click the “**Join**” button.

Note: You will be only able to connect to an Access Point that is set to Channel 6.

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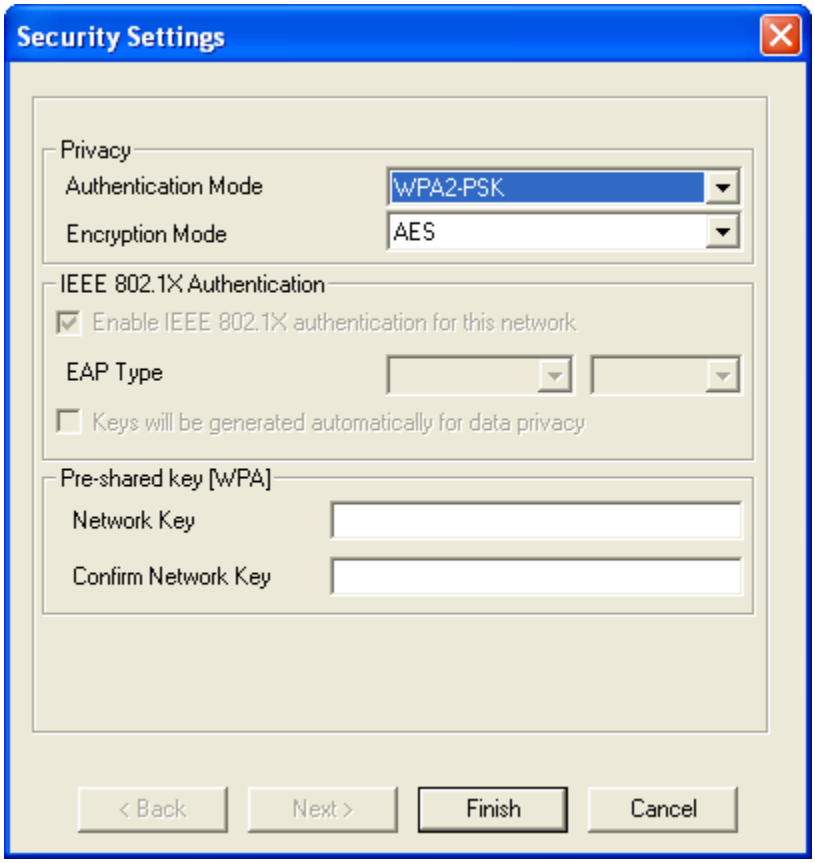

After selecting an AP, the user must choose Authentication Mode, Encryption Mode and Network Key to connect to the AP selected. After those fields are filled in, click the "**Finish**" button to start connect progress.

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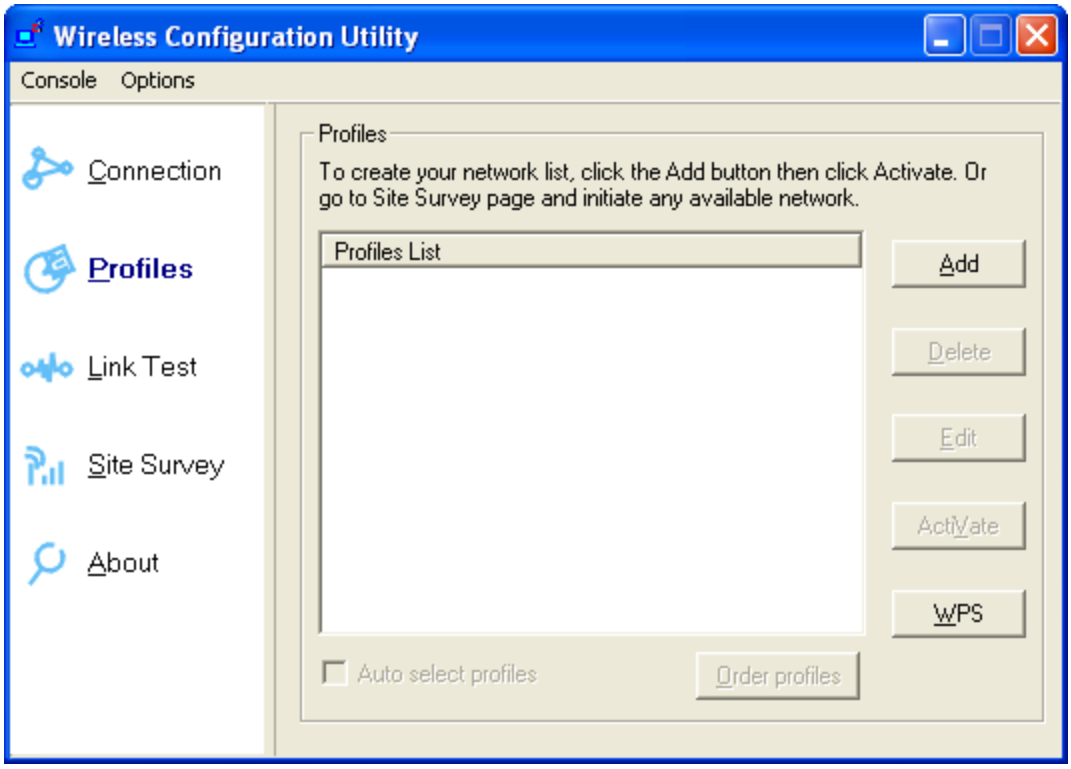
Profile Configuration Page of Main UI



On this page, the user can Add, Delete, Edit, Activate a Profile and use WPS to Connect an AP.

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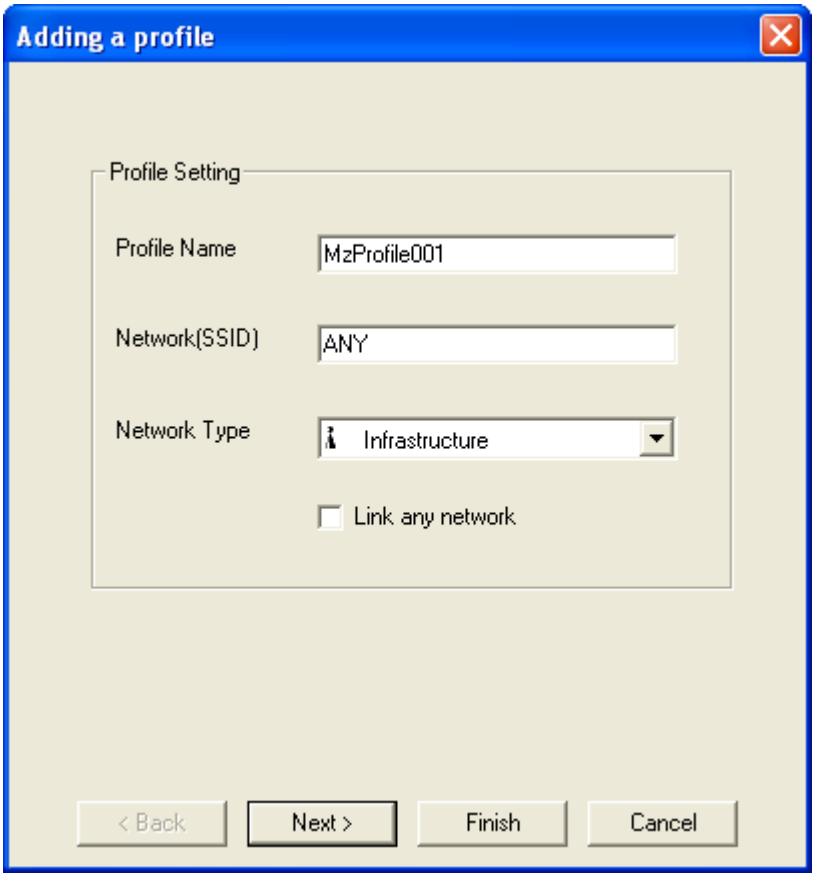
Add a Profile



Enter Profile Name, SSID and select Network Type on this page and click the "**Next**" button.

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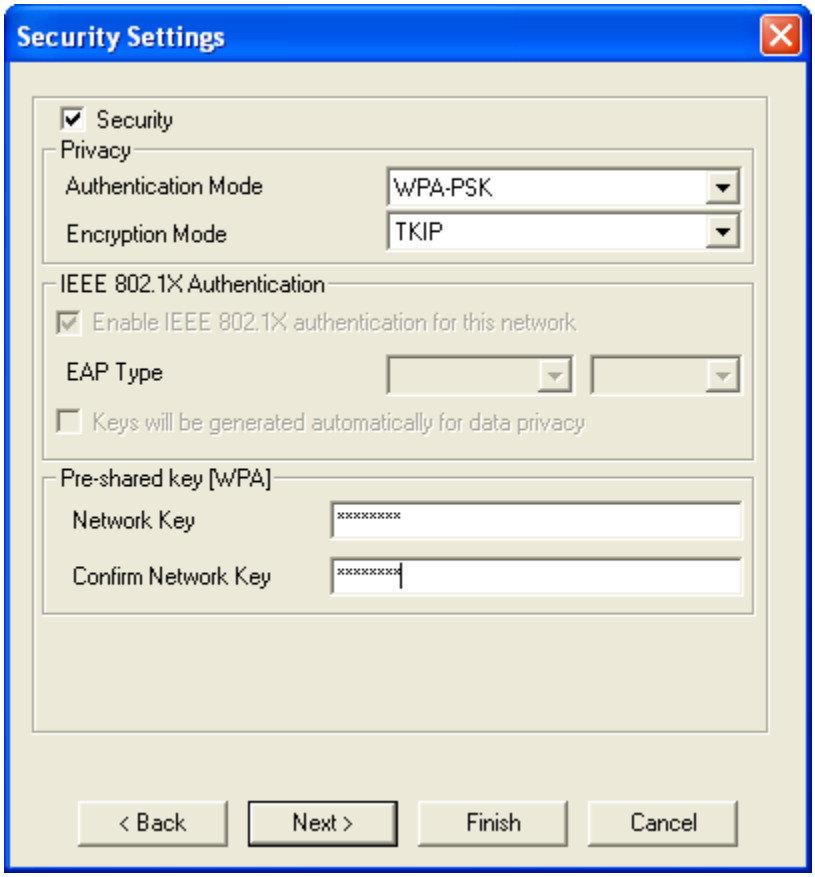

Select Authentication Mode, Encryption Mode and enter Network Key in on this page and click the "**Next**" button (if this information is not required, just use the default configurations, then click the "**Finish**" button to start connect).

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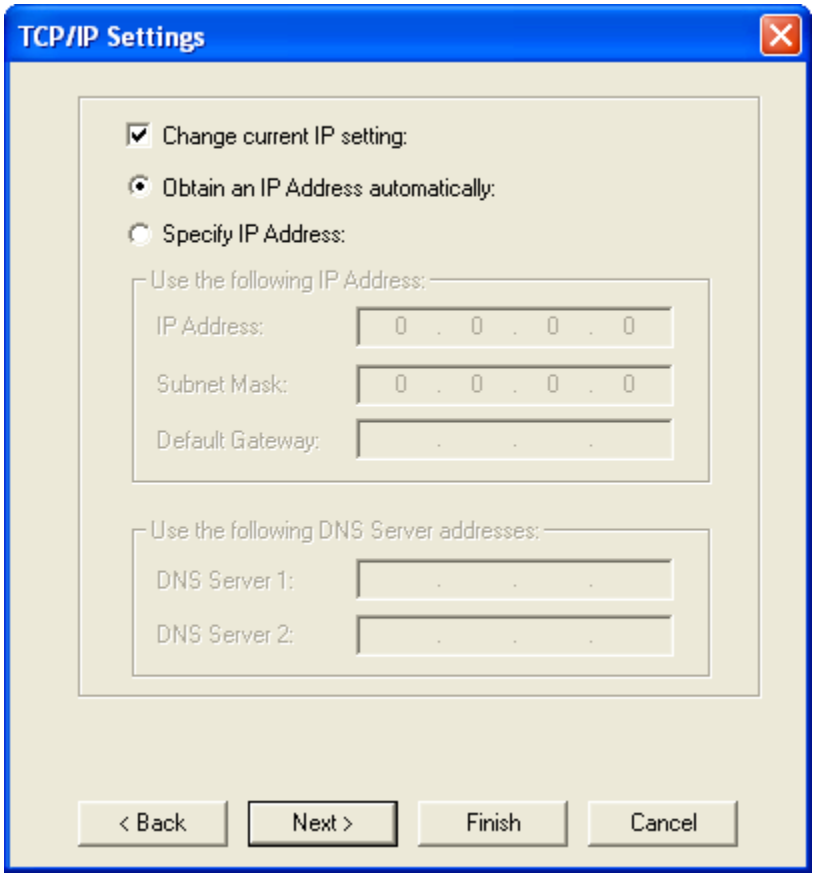

Select to Specify IP Address or Obtain an IP Address automatically.

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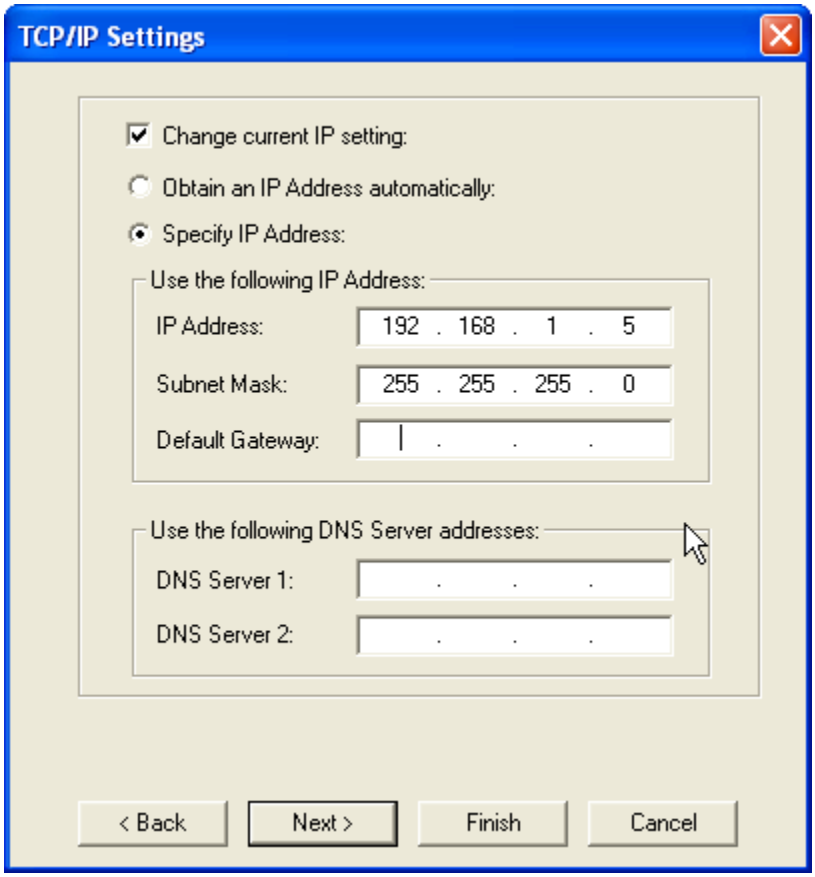

If selecting an IP address, fill in the required information. Check with your network administrator for IP address information.

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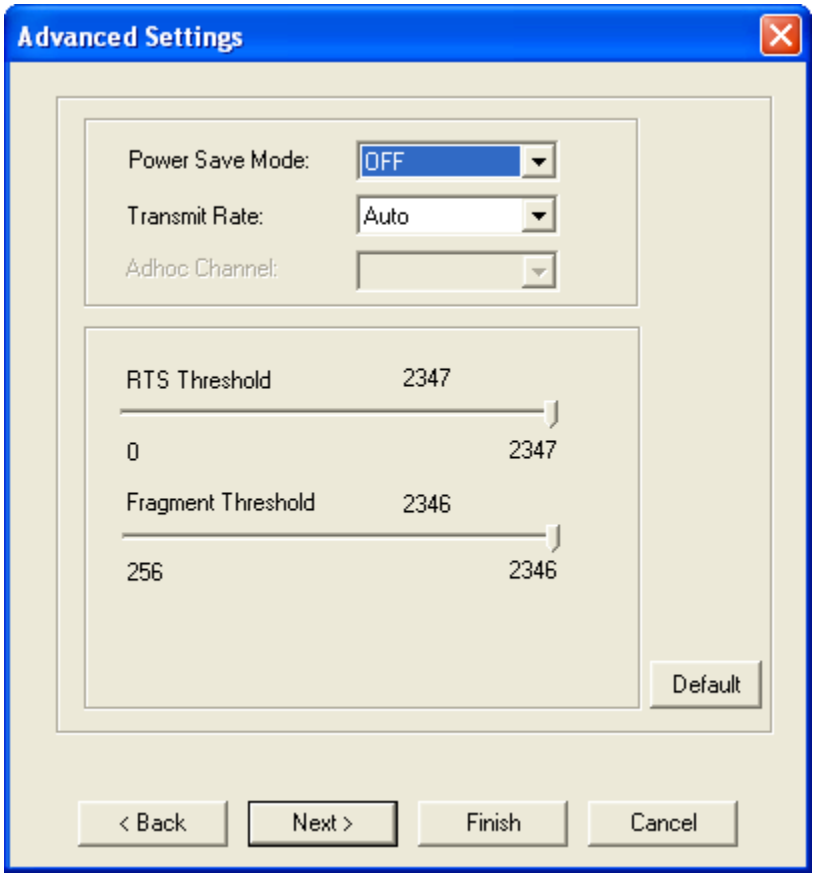

For advance settings, the Default is recommended. Click "**Next**" to continue.

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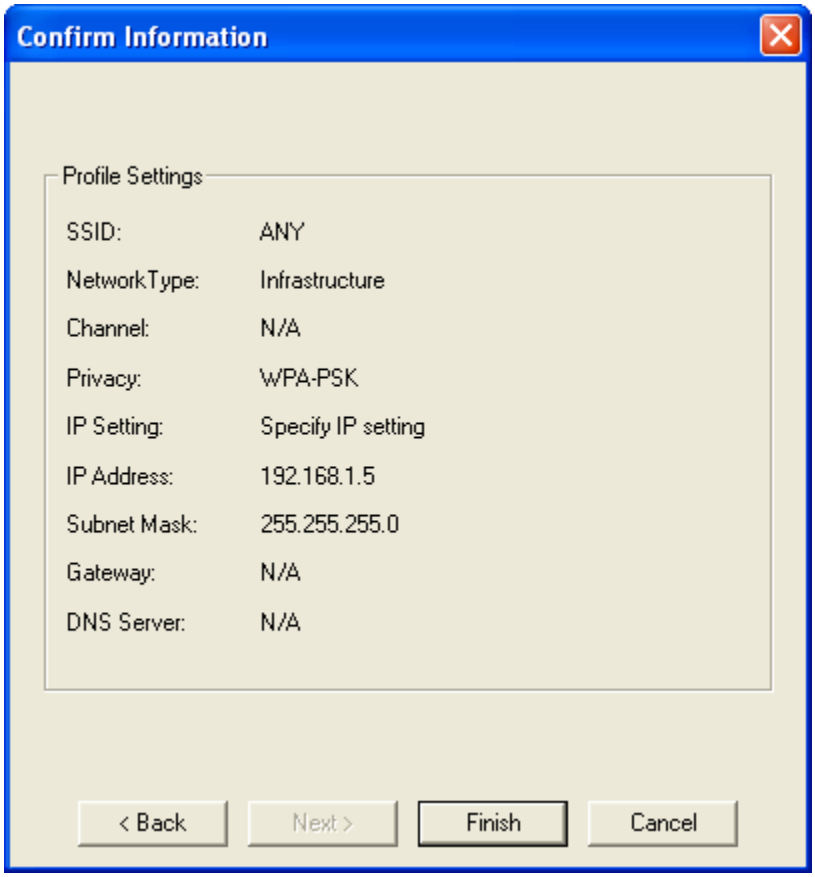
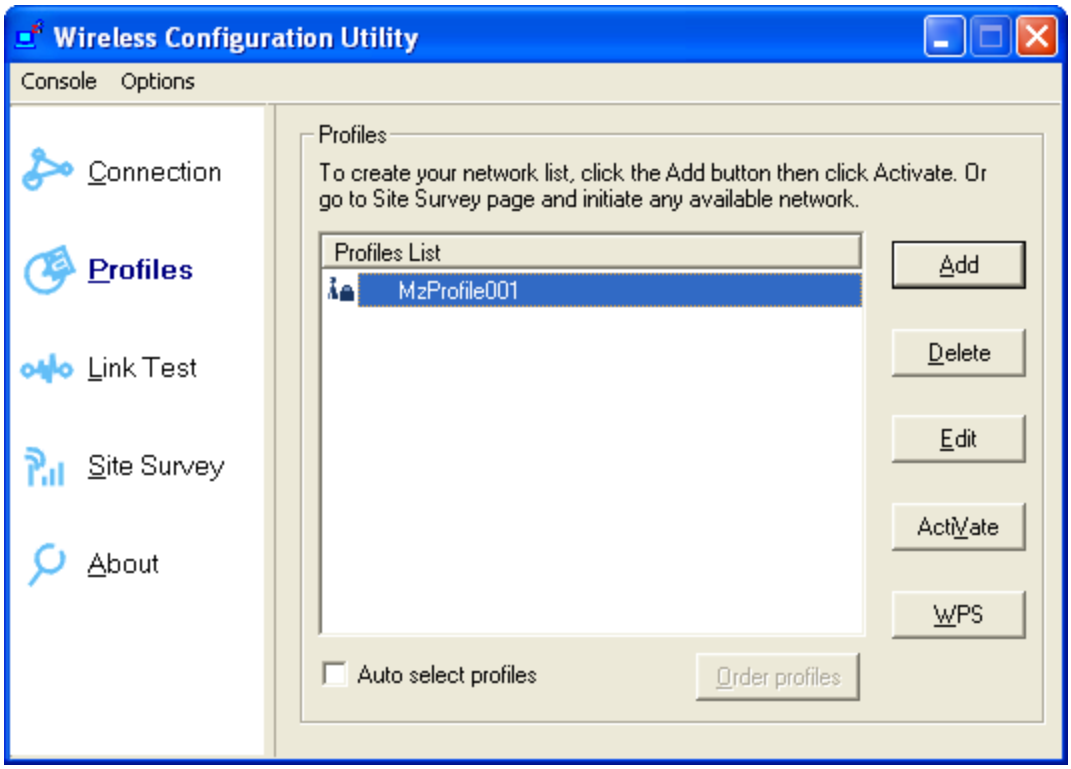


Click "**Finish**" to return to the Profile Configuration page of Main UI, A profile has been created.



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Additional options on this page include:

Delete a Profile:

Please select a profile and click the "**Delete**" button. The Profile will be deleted.

Edit a Profile:

Please select a profile and click the "**Edit**" button. You can then edit the parameters of the profile.

Activate a Profile:

Please select a profile and click the "**ActiVate**" button. This will activate the selected profile.

WPS:

Please refer to the next section "**WPS Configuration**"

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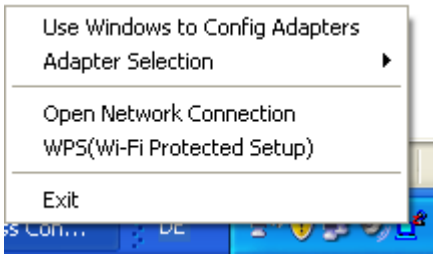
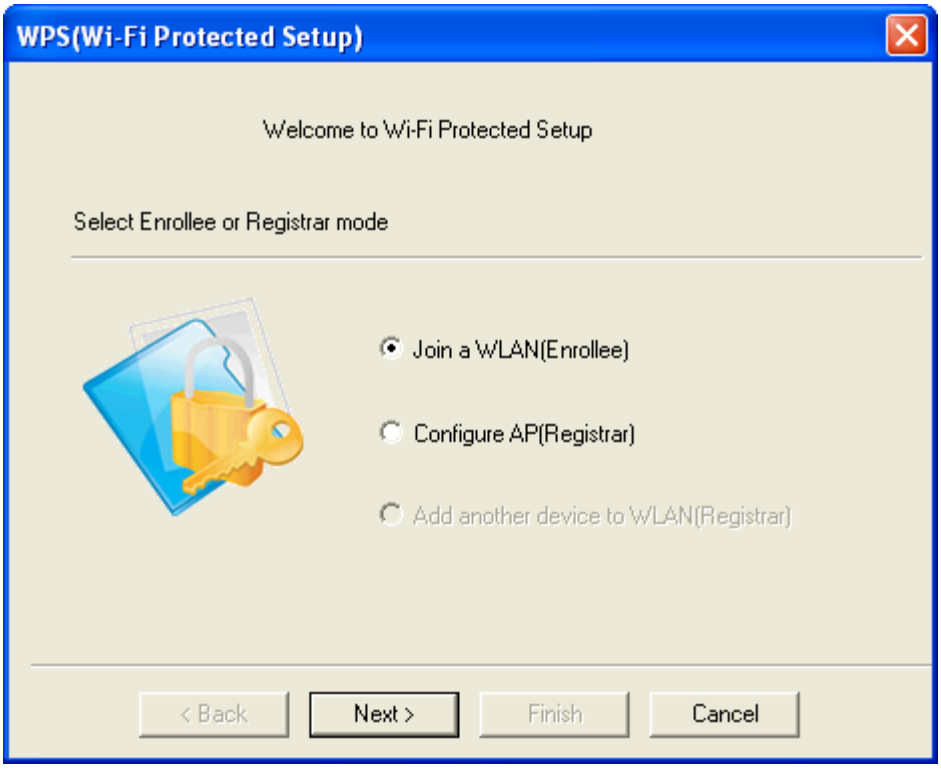
WPS Configuration

WPS Configuration has three methods, PBC, PIN code (Enrollee, Registrar);



Select WPS (Wi-Fi Protected Setup)

For Enrollee setup, select "**Join a WLAN(Enrollee)**" and click the "**Next**" button.



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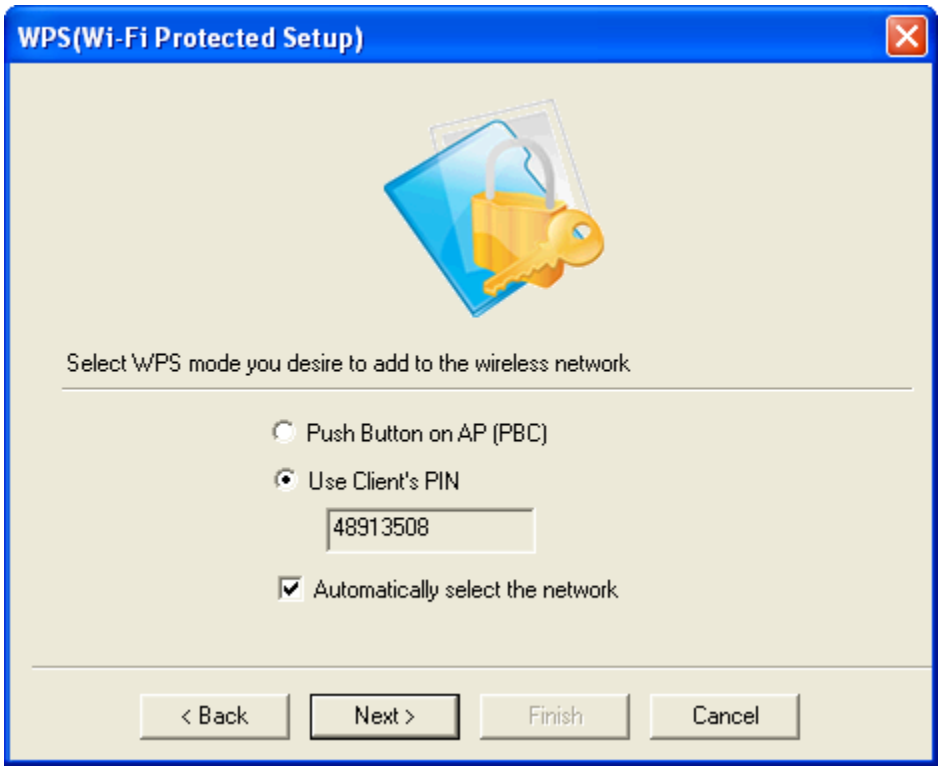
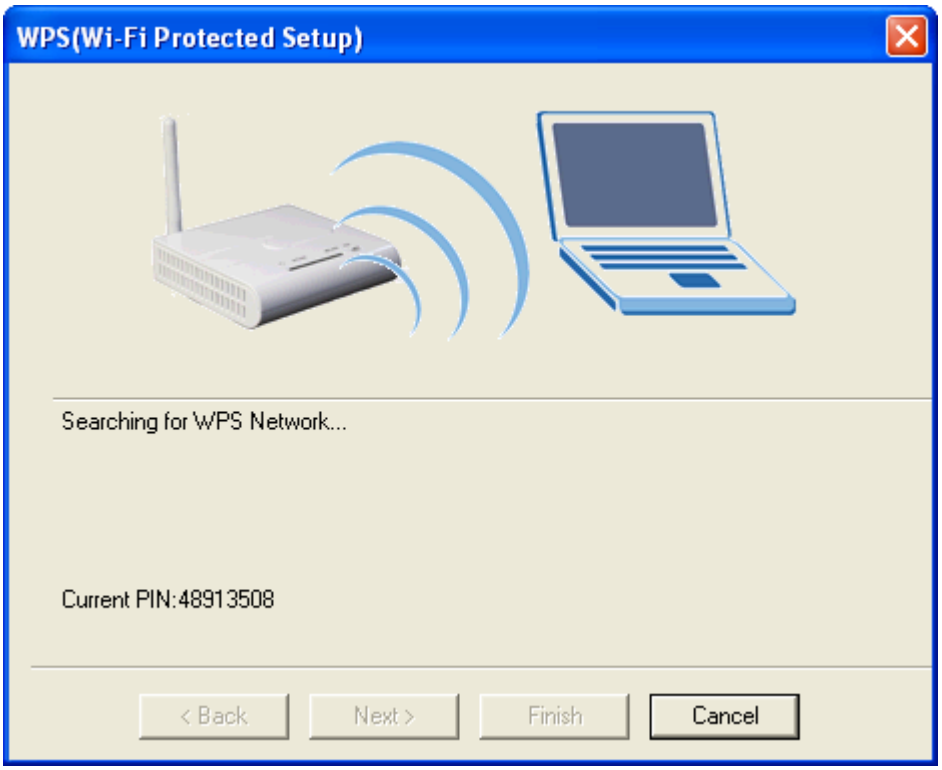
If PBC mode is selected, click "**Next**". The user must now press the AP's WPS button within 2 minutes. This will start the normal WPS process. If Client PIN mode is selected, remember the PIN code (48913508). Click the "**Next**" button to continue.



User must input the PIN Code into the AP within 2 minutes. The WPS process will be start normally.



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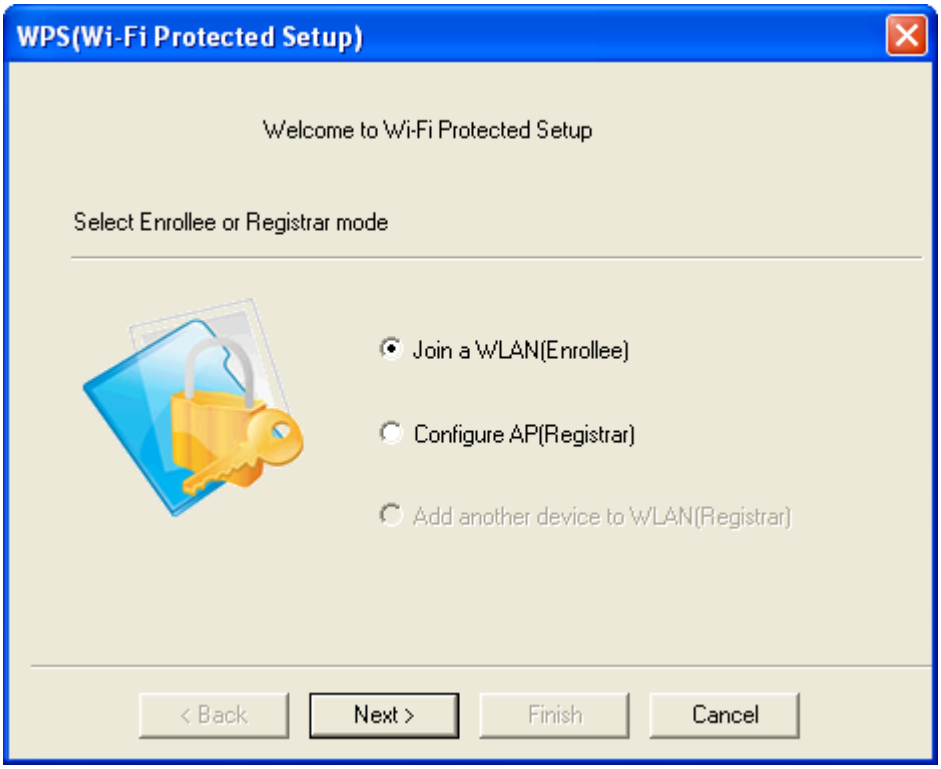
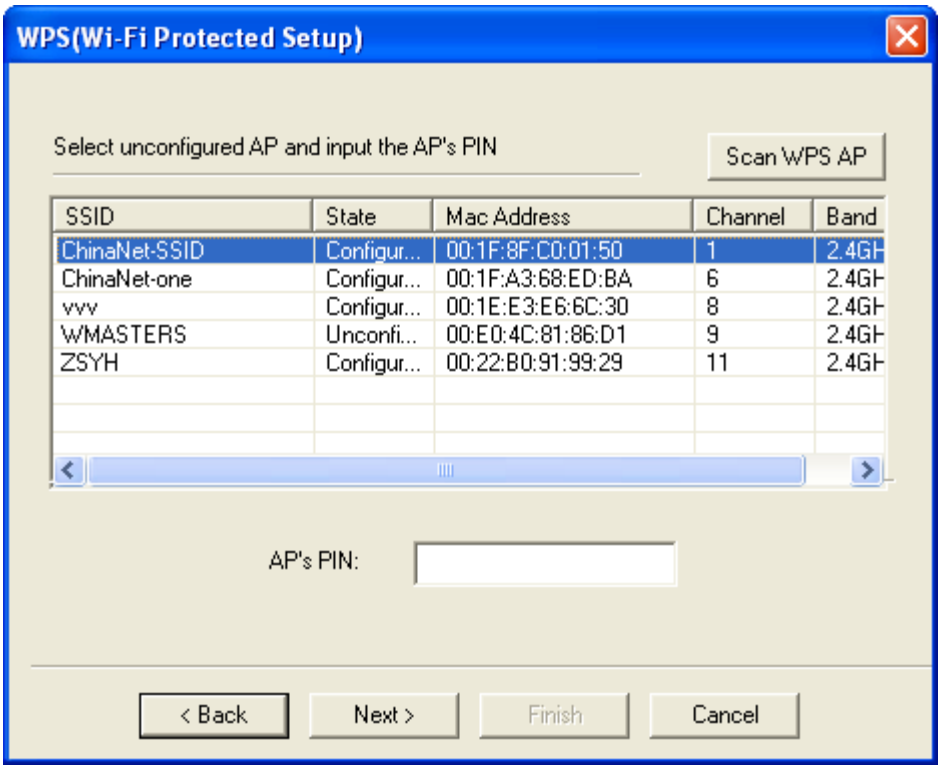
If user selects Configure AP(Registrar) mode:



Please select the AP and input AP's PIN code in the "AP's PIN:" field and click the "**Next**" button.



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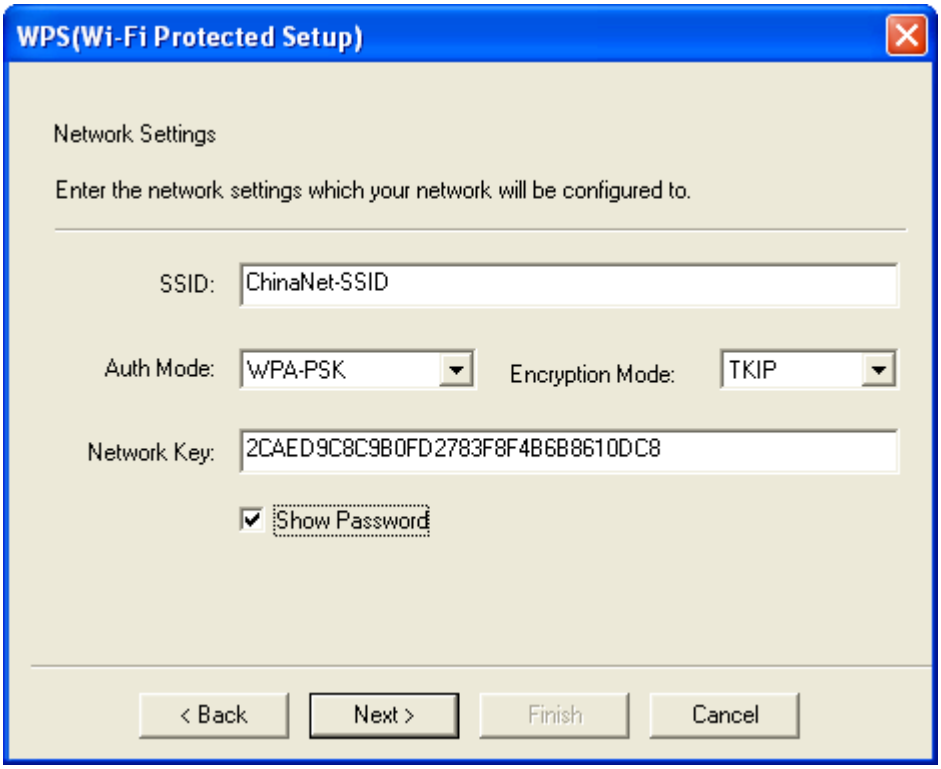
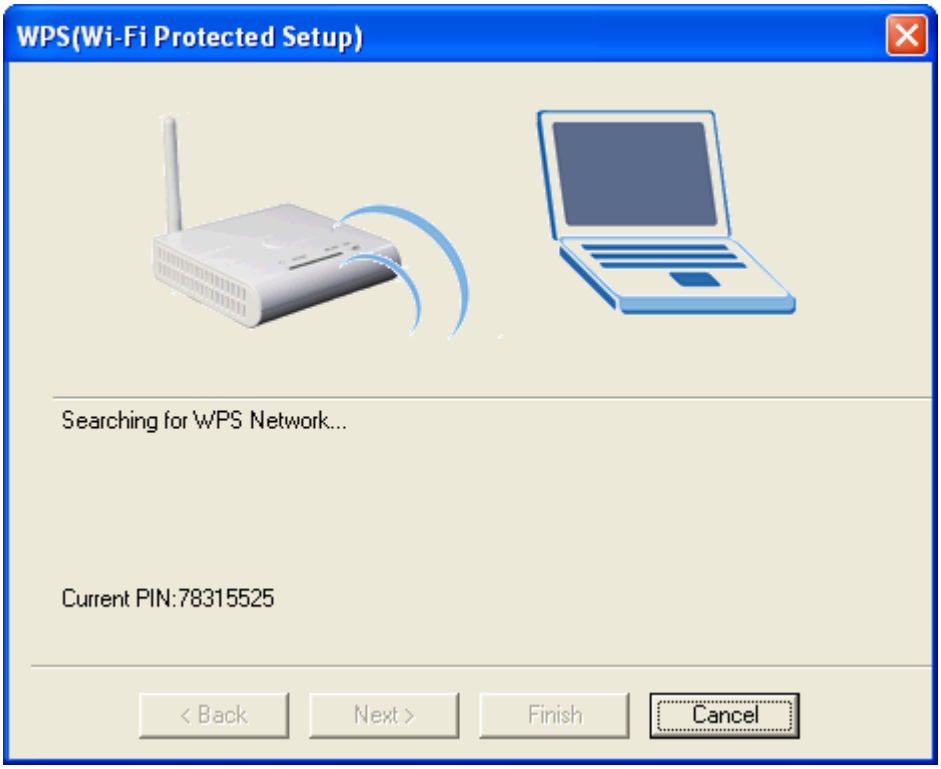


On this page the user can configure the AP's information. Then click the "**Next**" button.



The WPS Progress will start.

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